Small Business Innovation Research/Small Business Tech Transfer

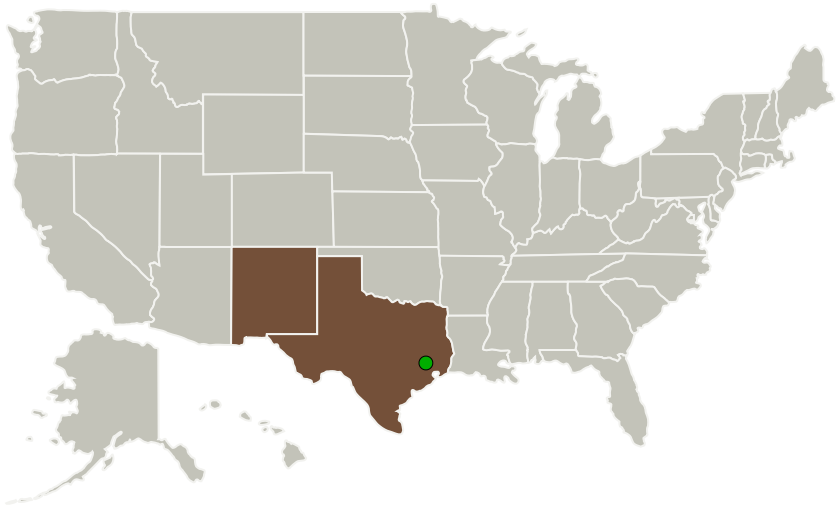
Hydrazine Monitoring Technology for Spacecraft Cabin, Phase I

Completed Technology Project (2017 - 2017)

Project Introduction

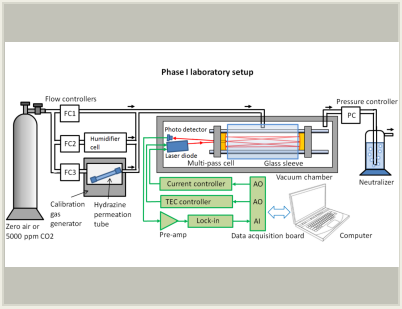
This project will develop an innovative, fast, sensitive and selective hydrazine measurement technology specifically designed for spacecraft cabin monitoring applications. The target instrument will be compact, robust and low-power with battery-powered option. The target hydrazine limit of detection is < 1 ppm, time response 30 s or better. The Phase I project will demonstrate the feasibility of the proposed hydrazine measurement approach and will yield benchtop technology ready for transition to a compact standalone prototype in Phase II.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Mesa Photonics, LLC	Lead Organization	Industry	Santa Fe, New Mexico
Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

Primary U.S. Work Locations	
New Mexico	Texas



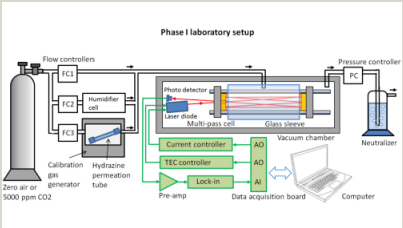
Hydrazine monitoring technology for spacecraft cabin, Phase I Briefing Chart Image

Table of Contents

Hydrazine Monitoring Technology for Spacecraft Cabin, Phase I

Completed Technology Project (2017 - 2017)

Images



Briefing Chart Image
Hydrazine monitoring technology for spacecraft cabin, Phase I Briefing Chart Image *(https://techport.nasa.gov/image/135757)*

Organizational Responsibility

Responsible Mission Directorate:
Space Technology Mission Directorate (STMD)

Lead Organization:
Mesa Photonics, LLC

Responsible Program:
Small Business Innovation Research/Small Business Tech Transfer

Project Management

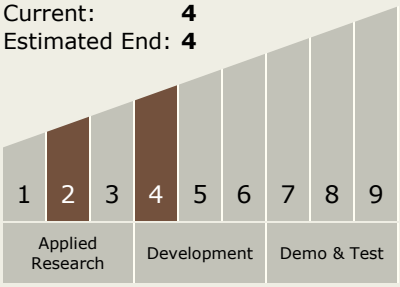
Program Director:
Jason L Kessler

Program Manager:
Carlos Torrez

Principal Investigator:
Andrei B Vakhtin

Technology Maturity (TRL)

Start: **2**
Current: **4**
Estimated End: **4**



Hydrazine Monitoring Technology for Spacecraft Cabin, Phase I

Completed Technology Project (2017 - 2017)

Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.4 Environmental Monitoring, Safety, and Emergency Response
    - TX06.4.1 Sensors: Air, Water, Microbial, and Acoustic

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System